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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,467	02/14/2007	Alessandro Facchin	78857.105669	1533

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King & Spalding LLP
401 Congress Avenue
Suite 3200
Austin, TX 78701

EXAMINER

KIM, CHRISTOPHER S

ART UNIT	PAPER NUMBER
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3752

NOTIFICATION DATE	DELIVERY MODE
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05/07/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/597,467	Applicant(s) FACCHIN, ALESSANDRO	
	Examiner Christopher S. Kim	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 23, 2010 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 9 appears to be directed to the embodiment of figure 6. The disclosure, as originally filed, fails to disclose a cavity formed by ball 228 and needle 22 being "at least partially filled with a material affixed to an inner wall of the cavity" as limited by parent claim 1.

5. Claims 3-5, 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "the material of a suitable stiffness" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 appears to be directed to the embodiment of figure 6 where the annular-shaped cavity 224 is formed by the needle 22 and ball 228. Parent claim 11 limits the cavity to be completely empty. Applicant argues that Palma's cavity is not completely empty because the cavity is filled by post 90. It is uncertain how applicant's annular cavity 224 can be completely empty but Palma's annular cavity does not constitute a completely empty cavity.

Claim Rejections - 35 USC § 102

6. Claims 11, 12, 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Palma (4,423,842).

Palma discloses a valve body comprising:

a needle 8;

a cartridge 32;

a recess 45;

a seat plate 46 comprising:

a needle seat 55;

the needle 8 further comprising:

a seat-part 73 comprising:

a sealing area 74;

a cavity 91;

wherein the cavity 91 is completely empty (the cavity is annular in shape formed by wall 91 and post 90).

The functional recitation "...makes the seat-part flexible in the sealing area..." requires the ability to flex. Substantially all materials are capable of some degree of flexure. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. MPEP 2114.

Claim Rejections - 35 USC § 103

7. Claims 1-4, 6, 7, 8, 10, 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lambert et al. (6,338,445) in view of Stier (6,631,854).

Lambert discloses a valve body comprising:

a needle 12;

a cartridge 10;

a needle seat 13a;

the needle further comprising:

a seat-part comprising:

a sealing area 12b;

a cavity 17a, 23, 27;

a material 24;

a sack volume 37;

an actuator unit (fuel pump).

Lambert discloses the seat-part being flexible in figures 6 and 7 and in column 9, lines 55-60.

Lambert differs from what is being claimed in the cartridge comprising a seat plate. Lambert's seat plate is integral with the cartridge.

Stier discloses a fuel injector valve having a cartridge 2 having a seat plate 6.

It would have been obvious to a person having ordinary skill in the art at the time of the invention to have made the cartridge of Lambert into two parts to include a seat plate as taught by Stier to ease manufacturing.

Response to Arguments

8. Applicant's arguments filed March 23, 2010 have been fully considered but they are not persuasive.

Applicant argues that Lambert does not teach a cavity that is at least partially filled with a material affixed to an inner wall of the cavity. Lambert discloses a material 24 affixed to an inner wall of cavity 17a, 23, 27.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher S. Kim/
Primary Examiner, Art Unit 3752

CK